19990331.ba v02_n483.bam.990331

>From ???@??? Thu Apr 01 07:11:59 1999
Message-Id: <199904010052.SAA05765@sco.theporch.com>
Date: Wed, 31 Mar 1999 18:51:58 CST
From: Old Tube Radios <boatanchors@theporch.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BOATANCHORS digest 2483

BOATANCHORS Digest 2483

Topics covered in this issue include:

1) Subject: Echophone EX107 anyone?
by Larry Kayser <kayser@rideau.net>
2) Re: hocum? inrush current limiter
by "Steve" <scb@loki.internettport.net>
3) Re: hocum? inrush current limiter (fwd)
by "Roberta J. Barmore" <rbarmore@indy.net>
4) Re: hocum? inrush current limiter (fwd)
by "Lawrence R. Ware" <lrware@pipeline.com>
5) BAs FS
by don merz <71333.144@compuserve.com>
6) Of Centimegs and men
by mnhopkins@juno.com
7) Re: hocum? inrush current limiter (fwd)
by "Arden Allen" <gumbear@pacbell.net>
8) Re: hocum? inrush current limiter (fwd)
by Bill Hawkins <bill@iaxs.net>
9) Re: hocum (?) inrush simple limiter
by polepeeg@aa4rm.ba-watch.org (Marty's Refl. Drop)
10) Re: hocum? inrush current limiter (fwd)
by polepeeg@aa4rm.ba-watch.org (Marty's Refl. Drop)
11) Henry 4K tubes??
by "Ed Santavicca" <santavic@ct.picker.com>
12) Re: Henry 4K tubes??
by "JOSE V. GAVILA (EB5AGV/EC5AAU)" <eb5agv@ctv.es>
13) inrush
by "Paul Bernhard Sr." <w2tu@email.msn.com>
14) Re: inrush
by Bill Hawkins <bill@iaxs.net>
15) FS:ARC5 C30/ARC5 BOX
by Maurice Weinschenker <morry@ix.netcom.com>
16) GPR-90 problem
by Brian.Harris@sv.sc.philips.com (Brian Harris)
17) ANB-H-1 & 1A, TDH-39 impedance
by Ray Mote <rmote@rain.org>
18) xtals wanted

by BEN NOCK <G4BXD@compuserve.com>
19) Re: hocum? inrush current limiter
by Gary Gitzen <garyg@cup.hp.com>
20) Re: ANB-H-1 & 1A, TDH-39 impedance
by PLT1032@aol.com

Message-Id: <2.2.32.19990331000757.00691a34@rideau.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Tue, 30 Mar 1999 19:07:57 -0500
To: Old Tube Radios <boatanchors@theporch.com>
From: Larry Kayser <kayser@rideau.net>
Subject: Subject: Echophone EX107 anyone?

>Maybe this is the only post-WW2 tombstone?

>It's a 5-band slide rule thing with an RF stage. Dial looks like that
>of a Halli S47.

?Understand it's in Dachis which I don't own.

>Anybody out there have one?

The Echophone was a wonderful minimalist war time radio, there is one on the shelf over at Fords in Smiths Falls see

http://www.falls.igs.net/~testequipment/

By the way, just to warm up cross border fibers a bit, I saw some r390's sans Meters in there last week, they looked pretty clean to me. They also had some neat stuff like S38, HT18, HQ129 etc etc. Good place to check for your BA desires....

No I dont own a chunk of it or benefit in any way just like to see the stuff move along to those who want it.

Larry, va3lk

Message-Id: <199903310216.UAA03904@loki.internettport.net>
From: "Steve" <scb@loki.internettport.net>
To: Old Tube Radios <boatanchors@theporch.com>
Date: Tue, 30 Mar 1999 20:01:17 +0000
MIME-Version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT
Subject: Re: hocum? inrush current limiter

CC: boatanchors@theporch.com

Good call, Marty. Wondered if anybody would catch that.

S.

Date: Tue, 30 Mar 1999 21:56:31 -0500 (EST)
From: "Roberta J. Barmore" <rbarmore@indy.net>
To: Old Tube Radios <boatanchors@theporch.com>
cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: hocum? inrush current limiter (fwd)
Message-ID: <Pine.SUN.3.96.990330212843.5471A-100000@indy1>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi!

On Tue, 30 Mar 1999, Arden Allen wrote:
> There's a couple of things that should also be considered:
> > ....There's a bit of a current spike, not a voltage spike. ....
>
> Yes. The primary current surge is due to the *reflected* load of the
> filter input capacitor charging from zero charge. The capacitor appears as
> a short circuit for the first few cycles, the limiting factor being the
> transformer primary and secondary winding resistances.

Ummm. No. And yes, sometimes. A SS rectifier will do this; a tube rectifier's emission slowly ramps up as the tube's filament or heater warms up and in most cases, this will limit the intital charging current of the condensers. Does it limit it *enough?* Judgement call; and that's why I like my little series resistor into the filter; borrowed it from Elmer Osterhoudt, in fact.

But there's an earlier, faster "hit" as the juice first hits the primary winding and the filed builds up, followed by yet another as the fils see the power. Cold resistance of the fils is lower than hot; this is then, finally, followed by filter condensers charging. Three things, all different rates of change, and all of 'em can be called "inrush."

Folks may tend to downgrade the "intial hit" effect but it's real enough--had the breaker for some serious bigtime iron kick itself out from my hand once, when I managed to flip it on at the exact wrong point in the cycle. The electricians we were working with were familiar enough with it to advise me on how to grab the braeker to avoid a sprained wrist.

> > ....Might tend to make the windings
> > want to shift a bit, but it will not, in and of itself, make the
> > insulation break down (it's voltage that does that trick).

>
> This is an erroneous concern in my opinion. If the windings of a transformer are not mechanically stabized by by proper consctruction and impregnation they will move to and fro with each AC cycle due to electromagnetic attraction/repulsion and eventually fail. Expansion and contraction of windings due to heating and cooling continues to have its deleterious on transformer life.....what can you do about that?

You do what the makers of fine, heavy-duty iron always have done: impregnate the windings with some serious goop. Kenyon used to brag on their vacuum-pump system of getting the stuff to really penetrate the windings, fer instance. It *is* a minor effect, but it's a real one, and old iron can fail for just the reasons you enumerate. In big transformers, it becomes a big concern--things can become quite ugly if you don't keep the wires in their place, and just as ugly if you try too hard in the wrong way to make 'em sit still.

>
> > ....the intial current is self-limiting: inductors oppose such rapid changes and the faster the current tries to ramp up, the faster the magnetic field builds up to slow it down, ...
>
> You are referring to inductive reactance which is of secondary (pun intended) concern in coupled inductors.........what goes on in the coupled (secondary) is reflected back to the coupling (primary)) inductor. Remember, a transformer transfers energy magnetically between coupled inductors and sometimes, like other types of couples, they struggle to see who's boss.......hi!

True enough--but there's a certain amount of energy that just goes into magnetizing the core, and *that* effect is more like a simple inductor if you split it away from the transformer's main job and look at it by itself. There's the initial X-sub-L, *then* we throw in reflected effects and start looking at the other nifty real-world factors, copper losses, iron losses, flux density et cetera, and after a few rounds of this, Mike Faraday turns a fire hose on the whole mess.... ;)

One of the things that crosses up folks understanding of power transformers (or mine, at least, when I get too fast and sloppy in thinking about it) is that it is easy to forget that the power line has, for all but the most incisive analysis, just about *zero* source impedance. It's as close to a "perfect" voltage source as most of us will ever see. Power & Light is gonna sit there at 110 to 125 VAC (or whatever flavor one's wall-socket juice arrives in) right up to the point where the breakers pop.

73,

--Bobbi

KB9GKX "RJ" rbarmore@indy.net   Roberta J. (Bobbi) Barmore
FISTS #3388 * G-QRP #10001 * ARRL * RSGB * WIA
Appreciator Of Vacuum-Tube Ham Gear and Vintage Keys

Message-Id: <3.0.5.32.19990330225150.008ea100@pop.pipeline.com>
Date: Tue, 30 Mar 1999 22:51:50 +0000
To: Old Tube Radios <boatanchors@theporch.com>
From: "Lawrence R. Ware" <lrware@pipeline.com>
Subject: Re: hocum? inrush current limiter (fwd)
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

At 21:56 03/30/1999 -0500, Roberta J. Barmore wrote:
<and>
>On Tue, 30 Mar 1999, Arden Allen wrote:
> There's a couple of things that should also be considered:
>> > ....There's a bit of a current spike, not a voltage spike.
<snip>

I'll just add one more piece of information to this thread....
Both Bobbi and Arden have implied, but have not stated explicitly:

The *initial* current into the transformer primary is also related
to what point on the AC wave form the switch is closed....
If you close the switch whilst the sine wave is close to zero,
the initial current starts at a low value and builds as the AC
sine wave climbs toward Ep (E peak), then falls as the magnetic
fields in the transformer build.
If the switch contact(s) close when the sine wave is at or close to
Ep (about 120V X 1.414, or roughly 170V peak) your initial current
is I=E/R, or for the junk box transformer I just measured:
170/12 or about 14 Amps. Steady state current may only be one or
two amps after things settle down, but a 14A instant surge <ouch>
still strikes me as a un-needed strain on 50 year old iron....

-Larry Ware
lrware@pipeline.com
Orlando, Florida

Date: Tue, 30 Mar 1999 23:18:47 -0500
From: don merz <71333.144@compuserve.com>
Subject: BAs FS
To: Old Tube Radios <boatanchors@theporch.com>
Message-ID: <199903302322_MC2-7005-B126@compuserve.com>
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

Boatanchors And Such For Sale

CONTACT: Don Merz, N3RHT, 47 Hazel Drive, Mt. Lebanon, PA 15228
71333.144@compuserve.com

Dynaco chassis amplifier. This is your basic mono tube hi-fi amp. It looks like it was pulled from a larger audio system--maybe a console. There's no preamp. The output tube sockets are marked KT-88 but the tubes in them are 6CA7's. The only other tubes are a 5R4 rectifier (socket marked GZ-34) and a 6AN8. Most of the small chassis is taken up by 2 huge transformers with "Dynaco" and part numbers stenciled on them. There's only one control (marked "input"), an octal socket marked "preamp" and speaker terminal strip marked "C-4-8-16-70V" The chassis is plated with something shiny though it doesn't look like chrome. Untested. As-is. $80.

Hammarlund HQ-140-X receiver. 1954-vintage radio covering .54-31mc in 6 bands. Front panel has one scratch in it near the S-meter. Otherwise the panel is excellent or better. The cabinet has various scrapes and scuffs and one surface-rusted area on top where the speaker must've been sitting (see below). Overall the cabinet is in good condition but not much better than that. This radio works reasonably well and is quite usable as it sits. Unmodified--all original. $120

Hammarlund matching speaker for the HQ-140-X. Some scrapes and scuffs but this should clean up to excellent condition. Big silver & orange Hammarlund logo. Driver looks original and works. But you can see a puncture in the paper cone. This is an uncommon speaker. $60. Will not sell until radio above is sold.

Heath IB-28 impedance bridge. Same old Heath impedance bridge electronics in modernized tan cabinet. Beautiful cosmetic condition. Untested. Complete. All original. With manual copy. $40

Leeds and Northrup capacitor 416614. This is a 12"L x 6"W x 8" H wooden box with a slate (I think) top that has 6 knife-switches and 2 binding posts mounted on it. The wiring between these switches and posts is engraved on the top. The arm of each SPDT knife switch is connected to one end of a capacitor. The cap can be switched onto either binding post connection. Absent any combinations (many are possible), the 5 cap values marked on the box are .05 MFD, .05 MFD, .2 MFD, .2 MFD and .5 MFD. The top has a pencil-eraser-sized chip out of one corner. The wooden box also has a big ding at the bottom at that corner. This may have been used to set up certain audio characteristics in a radio station. A tag that was on it was marked "Sound Room Number 36." Definitely unusual. As-is. $40

CONTACT: Don Merz, N3RHT, 47 Hazel Drive, Mt. Lebanon, PA 15228
71333.144@compuserve.com

From: mnhopkins@juno.com
To: Old Tube Radios <boatanchors@theporch.com>
Date: Tue, 30 Mar 1999 23:09:54 -0600
Subject: Of Centimegs and men
Message-ID: <19990330.232715.-314025.2.MNHopkins@juno.com>
MIME-Version: 1.0
Content-Type: text/plain
Content-Transfer-Encoding: 7bit

My recent notes on VHF receive converters of the v. tube era brought this pertinent post from W9RAN:

>Then there's the converter I found for a couple of bucks at the Rock
>Island IL hamfest: 432 Mhz Centimeg. It's a looker with black wrinkle
>bottom and shiny, silk-screened top plate. Kind of the McIntosh of
converters!
>Looks like good quality too, with metal-shielded above-chassis inductors
and
>BNC connector. No crystal. Uses 6AM4s in the business end, which I'm
>guessing was a TV tube. Ever see one of 'em?
>

A Centimeg converter from 1958 caused a sensation at the Central States VHF FM Society last year. I owned the thing, reluctantly, but thought its chrome resonate cavities were filter caps. My interest falls off at around 60MC. But WA5VJB, Kent, the columnist for CQ VHF visited and we got to talking about its probable output. I won that round by predicting it moved 432 down to 10 AND 11M. Although a '58 release, it was designed before we lost the old 11M allotment.

Kent took the thing to the Central States meeting and entered it in a receive noise figure contest. He tweaked it to the mid 4dBs. That is far from the below 2dB some of the Japanese GASfets get, but it is sobering to realize how little progress we have made since Ike was in the White House.

At the meeting was someone crazier than me or Bob, W9RAN. This guy had the companion Centimeg 432 transmitter and had to have the converter. They cell phoned me with a $25 offer which I took because that much money would buy a box full of Tecrafts if I don't have all of the survivors in the reference collection I hold under Texas trust law.

de ab5L, Michael Hopkins, Box 226841, Dallas, TX 75222,
MNHopkins@JUNO.com
Student of Tecraft, ICM, and Six Meters' golden age, 1956-58.

Message-Id: <199903310533.VAA06923@mail-gw3.pacbell.net>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: hocum? inrush current limiter (fwd)
Date: Tue, 30 Mar 1999 21:34:19 -0800
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Larry;

> .....Steady state current may only be one or
> two amps after things settle down, but a 14A instant surge <ouch>
> still strikes me as a un-needed strain on 50 year old iron....

Your point is well taken. But I lean toward the belief that a transformer that can't take an occasional "zonk" anymore will soon give up the ghost from vibration and heat. Once the winding insulation or paper between layers crumbles to powder you had better hope you have the right value fuses installed. I have more faith in the life long reliability of transformers, it's the poorly made ones that eventually crap on themselves.

Speaking of transformers kicking back when turning the power switch on and off rapidly, it's possible to interrupt the current at just the right moment to produce a "flyback" voltage spike when both primary and secondary are "disconnected". Arcing rectifier toobs ain't good. Good solid state designs use "controlled avalanche" rectifier devices to catch those spikes before they can produce lightening inside the power supply. Another good way to control tempermental transformers is with a *snubber*, a combination resistor and capacitor in series that offer nil loading to 60 Hz but gulp fast rise spikes and turn them into little moments of warmth inside the resistor. A snubber across a primary will help to tame the secondary but a snubber across the secondary, if one can find a suitably high voltage capacitor and resistor, will do the job nicely......a better way to coddle old power transformers. Snubbers are absent from power supplies because of Mad Man Muntz syndrome, high voltage parts are expensive. One can also entertain the use of gas tube arc suppressors (not cheap) and high voltage avalance diodes as "surgistors". MOV's in series will work too.

Arden Allen   KB6NAX   Vallejo, CA   gumbear@pacbell.net

Date: Wed, 31 Mar 1999 00:55:42 -0600 (CST)
From: Bill Hawkins <bill@iaxs.net>
Message-Id: <199903310655.AAA01944@citrus.iaxs.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: hocum? inrush current limiter (fwd)

There may be just a little more to transformer inrush. I think it depends on where the line was in the cycle when the transformer was last turned off. If the transformer has a mostly resistive load, it doesn't ring. The magnetizing force has gone away, but the core remains magnetized. Now, when you turn it on, it depends on the polarity that the primary first sees. If it's going the other way from when it was turned off, there's plenty of magnetic headroom and it behaves like a transformer. If it's going the same way, it can saturate and become the I=E/R problem that Larry mentioned.

Big transformers don't always pop the breaker when energised, or you couldn't get them turned on. If it's just starting voltage that counts, you'd lose the breaker maybe half the time. If it's both the voltage and the polarity, now you're down around 1 pop in 4 tries.

I think of inrush in terms of solenoids and relays, where the magnetic circuit is not closed until something mechanical moves to close it.

Just another thought - a thermal inrush limiter won't save a kilowatt transmitter's transformer (and rectifiers) from rapid re-closing because the thermal element has to cool down to be effective.

Regards,
Bill Hawkins

Date: Wed, 31 Mar 1999 02:25:04 -0500
From: polepeeg@aa4rm.ba-watch.org (Marty's Refl. Drop)
Message-Id: <199903310725.CAA29193@aa4rm.ba-watch.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: hocum (?) inrush simple limiter

Bill of Materials (small, count 'em on ur nostrils)

  110v/220v simple ac relay

10/20ohm WW res.

Instructions:

wire resistor in series w. big xfrmr primary (say, plate [anode] xfrmr)

wire relay NO contact across resistors

wire relay coil across big xfrmr primary

Theory: AC volts across xfmr primary rises to, say 70/140V, & relay pulls in shorting series resistors.

Transformer knows* how to count AC cycles for this to happen & takes all timing speculation away.

Ckt.'s been in use by X-ray makers for five decades. I thank Charles Josey, K4LNL, Picker x-ray mechanic extrodinaire for idea 15 yrs. back.

This is final cure for the occassional KER-WHAM that comes outa ptt acty on a KW-1, Desk KW, Globe King**, or Johnston*** 500.

Ask the man who drives one with such a ckt.

And on the intenstiy of a KER-WHAM event? Ask the dainty maiden who was mincing past the rig when a KER-WHAM maximum hit.

KER-WHAM comes from when 1st AC cycle is on a peak when ya mash the bar on the good ole D104. In my case, Ga Power is looking into a temporary dead short.

In today's real world where we live, these 2 parts are handled by a zero-crossing detector who's 'true' ignites a opto-iso that activates a diac that fires a triac in series w. xfrmr primary.

Sound like 'dem bones?'

"IC- bone connected to da diac bone, etc."

Well this 2 cents worth has turned to a financial journal & I just dunno why I wouldn't let that 5U4 warm-up self-limiting case rest.

'rm

* reminds me of a joke about why "thermos bottle worlds' greatest invention"

** Globe King, you make the bands sing

*** still think Pat Paulsen shuda beat Lyndon in the '64 election

---

Date: Wed, 31 Mar 1999 02:33:21 -0500
From: polepeeg@aa4rm.ba-watch.org (Marty's Refl. Drop)
Message-Id: <199903310733.CAA29207@aa4rm.ba-watch.org>
To: Old Tube Radios <boatanchors@theporch.com>
Cc: boatanchors@theporch.com
Subject: Re: hocum? inrush current limiter (fwd)

Bill on your last post and mine on KER-WHAM when a Desk KW ptt
event starts on a AC peak.

The KER-WHAM is max-max if you 'stutter-start the desk-kw. IE sink
the bar, drop it, then pull again... when the xfrmr flyback wave
hits the incoming opposite polarity wave.

Jemus!!! The noise'll break a window (or a widow for that matter)

Marty

Message-Id: <199903311200.HAA26989@central.picker.com>
From: "Ed Santavicca" <santavic@ct.picker.com>
To: Old Tube Radios <boatanchors@theporch.com>
Date: Wed, 31 Mar 1999 06:45:33 -0500
MIME-Version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT
Subject: Henry 4K tubes??

Does anyone remember which tubes the Henry 4K Ultra used? I have the
opportunity to buy this amp and wondered if I would have to get a second
mortgage on the house when it comes time to re-tube it.

tnx. 73, Ed

AA8TV
Lakewood, Ohio 44107

Message-Id: <3.0.1.32.19990331141025.00723924@192.168.0.1>
Date: Wed, 31 Mar 1999 14:10:25 +0200
To: Old Tube Radios <boatanchors@theporch.com>
From: "JOSE V. GAVILA (EB5AGV/EC5AAU)" <eb5agv@ctv.es>

Subject: Re: Henry 4K tubes??
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi Ed and the list,

It uses a single 8877. Not cheap, really!

Best regards,

JOSE

At 06:45 31/03/99 -0500, you wrote:
>Does anyone remember which tubes the Henry 4K Ultra used? I have the
>opportunity to buy this amp and wondered if I would have to get a second
>mortgage on the house when it comes time to re-tube it.
>
>tnx. 73, Ed
>
>AA8TV
>Lakewood, Ohio 44107

----
73 EB5AGV / EC5AAU
JOSE V. GAVILA
Benetusser - VALENCIA (SPAIN)

** VISIT MY VINTAGE RADIO SITE - updated 21-March-1999 ***
http://www.geocities.com/SiliconValley/6992/

EuroBA eGroup: http://www.eGroups.com/list/euro_ba_swap

Message-ID: <002101be7b85$d1dad940$99582299@default>
From: "Paul Bernhard Sr." <w2tu@email.msn.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: inrush
Date: Wed, 31 Mar 1999 09:50:27 -0500

All the technical and involved explanations are very interesting but as a construction electrician for many years, there is nothing like the feeling when you throw the main breaker in on a 1500-2000KVA transformer and it kicks out. Even though you've megger'd and thumped and hi-potted ad naseum, there is still that feeling in the pit of your stomach until the second or third time it finally holds. We called it "charging" the transformer.Probably not technically correct.

Paul B. W2TU

Date: Wed, 31 Mar 1999 09:30:54 -0600 (CST)
From: Bill Hawkins <bill@iaxs.net>
Message-Id: <199903311530.JAA02628@citrus.iaxs.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: inrush

>From: "Paul Bernhard Sr." <w2tu@email.msn.com>
----%<----
>We called it "charging" the transformer.

Maybe you were demagnetizing it?

Bill

Message-ID: <37024406.86E5BC7B@ix.netcom.com>
Date: Wed, 31 Mar 1999 10:49:26 -0500
From: Maurice Weinschenker <morry@ix.netcom.com>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: FS:ARC5 C30/ARC5 BOX
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

FS C30/ARC5 REMOTE CONTROL BOX.
18.20 INCLUDING PRIOTITY MAIL
BEST 73 MORRY K3DPJ

Mime-Version: 1.0
Date: Wed, 31 Mar 1999 09:47:36 -0800
Message-ID: <002E3259.1914@svlima.sv.sc.philips.com>
From: Brian.Harris@sv.sc.philips.com (Brian Harris)
Subject: GPR-90 problem
To: Old Tube Radios <boatanchors@theporch.com>
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit
Content-Description: cc:Mail note part

Attention GPR-90 owners:

I trying to determine if a problem that I have with my GPR-90 is inherent in the receiver design or if it is just a problem with my particular example. The problem is that the BFO wants to phase lock to the received signal. It is easy to determine if your receiver is doing this. All you have to do is turn on the crystal calibrator if your receiver has one or tune to a carrier if you don't. Turn the RF gain to max and attempt to zero beat the carrier. If you can approach zero beat very slowly and smoothly, achieving a tone of below 100 Hz or perhaps all the way down to the low end capability of the audio amplifier and your speaker system, you don't have the problem. If, however, you get close to zero beat and start getting sort of a thumping sound just before you suddenly are zero beat, yours has the same problem that mine has. I know how to fix this with a minor modification but I prefer to solve the problem at the source if is a component failure or somesuch.

As I am writing an article about this receiver I would appreciate your quick replies. By the way, my GPR-90 is serial #1953 (ink stamped on rear apron). I would appreciate knowing your serial numbers so as to better determine the number of units built. Thanks for your time.

73, Brian Harris WA5UEK

Date: Wed, 31 Mar 1999 09:18:12 -0800 (PST)
From: Ray Mote <rmote@rain.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: ANB-H-1 & 1A, TDH-39 impedance
Message-ID: <Pine.SUN.4.05.9903310907310.13055-100000@coyote.rain.org>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Typical low-z WW2 military headset impedance was about 600 ohms (for the HS-33 headsets which used either ANB-H-1 or ANB-H-1A elements). For those unfamiliar with these, the ANB-H-1's were in bakelite cases where the guts could be replaced, and the ANB-H-1A units were in crimped steel cases (nonreplaceable guts). Although I no longer have the source (NAVSHIPS 900,109), I seem to recall that the ANB-H-1 magnetic elements were 300 ohms and that the ANB-H-1A dynamic elements were similar (either 300 or 150). The TDH-39 elements were said to be equivalent to the ANB-H-1A, and were also dynamic, in crimped steel cases.

I've been going on past comments by Bobbi and others regarding the rule of thumb which states (if I have it right) that the impedance can be estimated as approximately 10X the measured DC resistance. However, the DC resistance of the units that Steve Bringhurst and I have been playing with is about 8 to 9 ohms DC resistance, which sounds a bit strange. Does anyone know if the old rule of thumb applies equally to dynamic elements, or am I way off base here? The gear I'd normally use to get a rough measurement of impedance is already packed, so I'll have to depend on the community knowledge base. Has anyone attempted to measure the impedance of the TDH-39's?

73....Ray Mote, K5FKT <rmote@rain.org> Oxnard, CA

Date: Wed, 31 Mar 1999 13:09:50 -0500
From: BEN NOCK <G4BXD@compuserve.com>
Subject: xtals wanted
To: Old Tube Radios <boatanchors@theporch.com>
Message-ID: <199903311310_MC2-701C-AED2@compuserve.com>
MIME-Version: 1.0
Content-Transfer-Encoding: quoted-printable
Content-Type: text/plain; charset=ISO-8859-1
Content-Disposition: inline

The following xtals are needed which, as they are out of band, =

should be lying around in many a junk box. Please have a look in
yours.

4035 to 4037 KHz and 4084 to 4086 KHz, =

any holder, FT-243 is probably the most common, but 10X etc
will be fine. =

thanks. Ben G4BXD.

From: Gary Gitzen <garyg@cup.hp.com>
Message-Id: <9903312034.AA19603@hpgaryg.cup.hp.com>
Subject: Re: hocum? inrush current limiter
To: Old Tube Radios <boatanchors@theporch.com>
Date: Wed, 31 Mar 1999 12:34:54 PST

Bill Hawkins wrote:

>Just another thought - a thermal inrush limiter won't save a kilowatt
>transmitter's transformer (and rectifiers) from rapid re-closing because
>the thermal element has to cool down to be effective.

Yup. Exactly why I also add 30 sec time delay relay contacts across the
inrush limiter. It shorts it out and lets it cool off. Caveat: it will
not protect if you cycle power at 31 seconds.

Gary

From: PLT1032@aol.com
Message-ID: <d17407d8.3702c203@aol.com>

Date: Wed, 31 Mar 1999 19:46:59 EST
To: Old Tube Radios <boatanchors@theporch.com>
Mime-Version: 1.0
Subject: Re: ANB-H-1 & 1A, TDH-39 impedance
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7bit

Well,
TDH-39's are still in use today and impedance varies depending on the requirement of the manufacturer ordering them. TDH-39's are still used in audiometric instrumentation for hearing testing. In fact, the Telephonics series of phones has a monopoly on the market because no one else seems to be interested in the market enough to have their phones meet A.N.S.I. requirements. I have TDH-39's on an audiometer that we currently sell and the impedance value is 10 ohms and this is the most common. Other manufacturers specify 50, 100, and 300 ohms. You can still buy these things new and nothing has changed since WWll. I figure they will still be produced for years to come.

I have a set of 300 ohmers that came from an audiometer and I use them on my BC-348.

End of BOATANCHORS Digest 2483
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